

Amendments to the Specification

Please replace the paragraph beginning at page 6, line 9, with the following rewritten paragraph:

The excitation signal IEn comprises a succession of n pulses, e.g. having a duty ratio of 0.5. The number of pulses n making up the excitation signal is such that $n \neq 1$. The frequency spectrum of each pulse includes at least an excitation frequency f_e close to the resonant frequency of the transducer, e.g. 1 MHz. Thus, since the transducer is comparable to an oscillator, when it is subjected to a succession of pulses, each pulse being substantially in the form of a squarewave, it will be put into conditions of sustained periodic oscillation, for a length of time that is associated with the number of pulses making up the excitation signal. The ultrasound signal emitted by the emitter transducer towards the receiver transducer through the medium between the two transducers results from the excitation signal whose characteristics are described above. At the receiver transducer, this wave gives rise to the receive signal SRn. The ultrasound signal and the resulting electrical receive signal as output by the receiver transducer typically have the form of a packet of waves, i.e. of an oscillation of amplitude that increases, reaches a maximum, and subsequently decreases. Since amplitude decreases when the emitter transducer is no longer subjected to the excitation signal, the signal then behaves as a damped oscillation.

Please replace the paragraph beginning at page 7 line 1 with the following rewritten paragraph:

The first oscillation P₁ of the receive signal has an amplitude V_{max(1)} that is low, but nevertheless greater than the trigger threshold V_{trig}, enabling it to be detected by a suitable electronic circuit. However, the ith oscillation P_i of the receive signal has an amplitude V_{max(i)} which is much greater than the trigger threshold V_{trig}. It is therefore clear that the error in measuring time that corresponds to the precise instant at which the threshold voltage crossing is detected decreases with increasing amplitude. Consequently, the error in the ith ~~osculation~~ oscillation P_i is much smaller than the error on the first oscillation P₁. In order to minimize error in measuring propagation time, it is therefore preferable to measure an intermediate propagation time on the ith oscillation, and then correct the measurement by subtracting the time that elapses between the first oscillation and the ith oscillation being detected.

Please replace the abstract on page 17 with the following rewritten abstract:

A B S T R A C T

~~A METHOD AND APPARATUS FOR MEASURING THE PROPAGATION TIME
OF A SIGNAL, IN PARTICULAR AN ULTRASOUND SIGNAL~~